

This species has not been found in any collection of herbarium specimens and has not been reported from any other locality. The possibility is not absolutely excluded that the species may not be an old one, or may indeed be a hybrid between *Capsella* and another genus, yet so skilful an observer as Solms is disposed to believe it a new species originating by recent mutation from *C. Bursa-pastoris*. It has been found constant in its characters and self-sustaining so far. Numerous other instances of accidental observation might be cited but it will be profitable to pass at once to the cultural experiments of de Vries.

(To be continued.)

THE ACAULESCENT VIOLETS OF CENTRAL NEW YORK

BY HOMER D. HOUSE

VIOLA PALMATA L. Sp. Pl. 933. 1753.

V. palmata var. a. *vulgaris* Ell. Bot. S. C. & Ga. 1: 300. 1817.

V. palmata var. b. *fragrans* Ell. l. c.

V. cucullata var. *palmata* A. Gray, Man. 28. 1867 [ed. 5].

Not common in central New York. The entire-leaved forms are some seasons more abundant than the forms with palmately divided leaves. The two forms are always found associated in this region. The entire-leaved variety I shall designate as :

Viola palmata asarifolia (Pursh).

V. asarifolia Pursh, Fl. Am. Sept. 732. 1814.

V. palmata sororia Pollard, Bot. Gaz. 26: 332. 1898. Not *V. sororia* Willd. Hort. Berol. 1. pl. 72. 1806. Perhaps *V. sororia* Willd. Enum. 263. 1809, and of Le Conte, Schweinitz, Nuttall, etc.

Mr. C. L. Pollard refers the entire-leaved forms of *Viola palmata* to Willdenow's *V. sororia*. I am not familiar with the reference Mr. Pollard gives to Willdenow's *sororia*, viz., Enum. 263. 1809. I am, however, familiar with his use of the name in

his Hortus Berolensis, 1: *pl.* 72. 1806, and excepting the flowers, which are poorly figured, both the description and figure represent a violet perfectly distinct and not to be confused with any entire-leaved *palmata*. The entire-leaved variety of *V. palmata* is distinguished from the next by its more erect and stiffer habit, leaves ovate to hastate-reniform with nearly truncate bases, and rather short deflexed cleistogenes.

VIOLA SORORIA Willd. Hort. Berol. 1: *pl.* 72. 1806. Not Enum. 263. 1809. Not Pursh nor LeConte.

V. villosa var. *cordifolia* Nutt. Gen. 1: 148. 1818.

V. cordifolia Schweinitz, Sill. Journ. 5: 62. 1822.

V. nodosa Greene, Pittonia, 4: 296. 1901. In part.

A very common violet in central New York, preferring rather dry but rich soil in woods or upland meadows, common along shady roadsides. It bears no resemblance to any entire-leaved forms of *palmata*. Willdenow does not state that his type was from Pennsylvania; but if it was, which is very probable, it must have come from Muhlenberg, his correspondent there. At any rate, the species seems to have been familiar to the early botanists of Pennsylvania. Darlington describes it in his Flora Cestrica, 144. 1837, and adds the observation, "Leaves 1-2 inches long, mostly orbicular and subreniform, sometimes cordate and rather acute, sprinkled with rigid hairs, especially on the upper surface," etc. In the herbarium of the New York Botanical Garden is a specimen labeled by Darlington "*V. sororia*," which agrees with specimens of my gathering in central New York. In the same place are specimens labeled as follows:

"*V. sororia* Willd. (*V. villosa* Walt. β *cordifolia* Nutt.) Unio itiner, in civitate Ohio, 1837, FRANK."

These specimens also agree with the central New York plant, and Dr. Britton tells me that with Mr. Bicknell, he has often collected this violet in Pennsylvania and is inclined to believe that it is Willdenow's *sororia*. It is evident, then, that the name *sororia* is to be connected with a plant of smaller size than *V. palmata* with more lax appearance of foliage, more softly pubescent leaves of softer and thinner texture. The leaves are never hastate reniform in shape, but have almost always a deep sinus or are at

least cordate with margins crenate or crenate-serrate. Cleistogamous flowers on simply horizontal peduncles.

VIOLA CUCULLATA Ait. Hort. Kew. 316. *pl. 12.* 1789.

V. palmata var. *cucullata* A. Gray, Bot. Gaz. 11: 254. 1886.

The common "bog-meadow" violet of this region, with pale green foliage, cucullate leaves, and slender cleistogamous flowers on slender, erect peduncles.

VIOLA PAPILIONACEA Pursh, Fl. Am. 1: 173. 1814.

V. obliqua Britton & Brown, Ill. Fl. 2: 447. 1897. Not Hill, Hort. Kew. 316. *pl. 12.* 1769.

V. communis Pollard, Bot. Gaz. 26: 326. 1898.

A violet of moist or low meadows and shady situations about dwellings; not rare, but until recently confused with *V. obliqua* and *V. cucullata*.

VIOLA OBLIQUA Hill, Hort. Kew. 316. *pl. 12.* 1769. Not *V.*

obliqua Britton & Brown, Ill. Fl. 2: 447. 1897.

V. affinis LeConte, Ann. N. Y. Lyc. 2: 138. 1828.

Not a rare violet in swamps and wet meadows. The description in Britton's Manual of the Northern States and Canada applies well to the central New York form.

VIOLA CRENULATA Greene, Pittonia, 4: 295. 1901.

A small, tufted, bog-meadow violet with small crenate, glabrous leaves on short petioles; flowering scapes greatly exceeding the leaves, the flowers pale-violet. Resembling *V. cucullata* in its foliage and habitat, but differing from it in its tufted appearance and cleistogamous flowers on very short deflexed or at least horizontal peduncles.

VIOLA ODORATA L. Sp. Pl. 934. 1753.

Introduced and rather common.

VIOLA ROTUNDIFOLIA Michx. Fl. Bor. Am. 2: 150. 1803.

Not common in central New York. I have collected specimens in Herkimer county and have seen specimens collected in Madison county. Reported from the vicinity of Syracuse.

VIOLA SELKIRKII Pursh; Goldie, Edinb. Phil. Journ. 6: 324. 1822.

Locally abundant in Herkimer, Oneida, Madison and Onon-

daga counties. Preferring mossy rocks in damp, shady ravines.

VIOLA BLANDA Willd. Hort. Berol. *pl.* 24. 1806.

✓ VIOLA LECONTEANA Don, Gen. Syst. I: 324. 1831. Britton, Man. 1049. 1901.

V. amocna LeConte, Ann. N. Y. Lyc. 2: 144. 1825. Not

V. amocna T. F. Forst.; Symons, Syn. 198. 1798.

V. blanda var. *palustriformis* A. Gray, Bot. Gaz. II: 255. 1886.

V. blanda amoena (LeConte) B.S.P. Prel. Cat. Anth. and Pterid. 6. 1888.

Viola alsophila Greene, Pittonia, 4: 7. 1899.

Rarely found in Herkimer county. Long Branch, Onondaga county.

VIOLA RENIFOLIA A. Gray, Proc. Am. Acad. 8: 288. 1870.

V. blanda renifolia A. Gray, Bot. Gaz. II: 255. 1886.

VIOLA LANCEOLATA L. Sp. Pl. 934. 1753.

Only a few specimens of *V. lanceolata* have been collected along the edge of a swamp near Syracuse, and so far as I know this is the only record of its being found in this region.

SYRACUSE, N. Y., March 1, 1902.

DESCRIPTION OF A NEW FOSSIL SPECIES OF CHARA

BY F. H. KNOWLTON

Some weeks ago, by the kindness of Professor T. D. A. Cockerell, of East Las Vegas, New Mexico, I was informed that certain fluviatile deposits of Pleistocene age exposed in that vicinity contained great numbers of *Chara* "fruits." A few days since I received from Miss Ada Springer, a student of Professor Cockerell's, a box containing a considerable quantity of this material. Accompanying it was a short description of the "fruits" and a drawing which is the basis of the one here presented.

As this species proves to be wholly unlike any fossil species previously described from this country I venture to describe it as new under the name :